



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/634,755	08/08/2000	Ronald Coleman	CITI0168-US	4348

75127 7590 02/02/2012  
SNR DENTON US LLP (CITI CUSTOMER NUMBER)  
ATTN: Eric Sophir  
P.O. BOX 061080  
CHICAGO, IL 60606-1080

EXAMINER
----------

WINTER, JOHN M

ART UNIT	PAPER NUMBER
----------	--------------

3685

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

02/02/2012

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

eric.sophir@snrdenton.com  
sg.citi-docket@snrdenton.com  
patents@snrdenton.com

<b>Office Action Summary</b>	<b>Application No.</b> 09/634,755	<b>Applicant(s)</b> COLEMAN ET AL.	
	<b>Examiner</b> JOHN M. WINTER	<b>Art Unit</b> 3685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-15, 17-20 and 29-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-15, 17-20 and 29-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Acknowledgements***

1. The Applicants amendment filed on October 25, 2010 is hereby acknowledged, Claims 11-15, 17-20 and 29-42 remain pending. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Response to Arguments***

2. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 41 is rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter.

Based upon consideration of all of the relevant factors with respect to the claim as a whole, claim(s) 41 is held to be directed to an abstract idea, and is/are therefore rejected as ineligible subject matter under 35 U.S.C. 101. The rationale for this finding is explained below:

Claims 1-5 and 11-19 are rejected based on Supreme Court precedent (See also *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978);

Art Unit: 3685

*Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876)) and recent Federal Circuit decisions, a §101 process must (1) be tied to a particular machine or apparatus (machine implemented); or (2) particularly transform a particular article to a different state or thing. In addition, the tie to a particular apparatus, for example, cannot be mere extra-solution activity. See *Bilski v. Kappos*, 95 USPQ2d 1001 (US 2010)).

An example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps.

To meet prong (1), the method step should positively recite the other statutory class (the thing or product) to which it is tied. This may be accomplished by having the claim positively recite the machine that accomplishes the method steps. Alternatively or to meet prong (2), the method step should positively recite identifying the material that is being changed to a different state or positively recite the subject matter that is being transformed. In this particular case, claim 41 fails prong (1) because the “tie” (e.g. risk assessment data set ) is representative of extra-solution activity. Additionally, the claim(s) fail prong (2) because the method steps do not transform the underlying subject matter to a different state or thing.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 3685

Claims 11-14, 17-20, 29-34 and 36-42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 11 recites the feature “assessing by the computer the credibility that changes to the set of input financial data are the result of one or more errors”, however the Applicants specification merely states that states “Since some change is expected and not necessarily the result of errors, we select ranges of odds that are indicative of errors to the input data. In other applications, input data may be more regular than in the present embodiment. If data is more regular, then smaller changes in content may be more likely caused by errors than that shown in Table 4” (Page 15, paragraph 2). The Applicants specification does not support the claimed feature “result of one or more errors” since the specification merely recites the likelihood of an error and not that an error actually occurred.

Claims 12-14, 17-20, 29-34 and 36-42 are either dependent upon claim 11 or contain similar limitations and are rejected for at least the same reasons.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a

Art Unit: 3685

person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11-14, 17-20, 29-34 and 36-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reboh et al., (US Patent No 4,866,634) in view of Hedstrom et al. (US Patent 6,477,471) and further in view of Grant et al (US Patent 4,694,397).

5. As per claims 11, 14, 30, 41 and 42

Reboh et al. ('634) discloses a computer-implemented method comprising:

receiving by a computer a set of input financial data; (Column 4, lines 18-23)

storing by a computer one or more historical values, each historical value representing a previous set of input financial data; (Column 4, lines 24-34)

Reboh et al. ('634) does not explicitly disclose performing by a computer a mathematical calculation using the information content of the input financial data and the information content of the one or more historical values and presenting by the computer a confidence level that a change between the information content of the input financial data and the information content of the one or more historical values is caused by an error.

Hedstrom et al. ('471) discloses performing by a computer a mathematical calculation using the information content of the input financial data and the information content of the one or more historical values and presenting by the computer a confidence level that a change between the information content of the input financial data and the information content of the one or more historical values is caused by an error; (Figures 4 and 5, Column 3, lines 19-36 – confidence level corresponds to “goodness” prediction). It would have been obvious to one of ordinary skill in the art at the time of the invention was made

Art Unit: 3685

to combine the Reboh et al method with Hedstrom et al. ('471) method in order to reduce the cost of error correction in databases by providing a simple and inexpensive process to ensure the quality of the data being processed.

Reboh et al. ('634) does not explicitly disclose assessing by the computer the credibility that changes to the set of input financial data are the result of one or more errors.

Grant et al ('397) discloses assessing by the computer the credibility that changes to the set of input financial data are the result of one or more errors ( column 7, lines 38-49). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the Reboh et al., in view of Hedstrom et al.' method with Grant et al ('397)'s method in order to reduce the cost of error correction in databases by providing a simple and inexpensive process to ensure the quality of the data being processed.

6. As per claims 15, 33 and 38,

Reboh et al. ('634) discloses the system of claim 14,

Official Notice is taken that "displaying an icon indicating an error" is common and well known in prior art in reference to statistical analysis. It would have been obvious to one having ordinary skill in the art at the time the invention was made that an error would cause the user to be notified.

7. As per claim 17,

Reboh et al. ('634) discloses the system of claim 11,

Art Unit: 3685

Official Notice is taken that “the statistical analysis is performed by calculating the Shannon entropy” is common and well known in prior art in reference to statistical analysis. It would have been obvious to one having ordinary skill in the art at the time the invention was made that the statistical analysis is performed using Shannon entropy because this is a standard technique that is well known and found in any statistical analysis textbook.

As per Claims 18-20, 29, 32 and 39 and 40,

The prior art teaches a method of statistical analysis, but not the process of non-parametric resampling statistics, Bayesian statistics or parametric statistics ". However, since these probability and statistics processes are old and well known in the field of art and thus is no more than the simple substitution of one known element for another it would be obvious to one of ordinary skill, would be to use statistical and probability tools such as non-parametric resampling statistics, Bayesian statistics or parametric statistics in order to perform statistical analysis. Ex parte Smith, 83 USPQ2d 1509 (Bd. Pat. App. & Int.

8. Claims 12, 13, 34 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reboh et al., (US Patent No 4,866,634) in view of Hedstrom et al. (US Patent 6,477,471) in view of Grant et al (US Patent 4,694,397) and further in view of Masch (US Patent 5,930,762).

9. As per claim 12,



Art Unit: 3685

Reboh et al. ('634) discloses the method of claim 11,

Reboh et al. ('634) does not explicitly disclose the input data includes financial data feeds from one or more data processing systems. Masch ('762) discloses the input data includes financial data feeds from one or more data processing systems;(Column 2, lines 21-34) It would be obvious to one having ordinary skill in the art at the time the invention was made to combine the Reboh et al. in view of Hedstrom et al. in view of Grant et al with the Masch ('762) method in order to generate a sufficient amount of data to achieve statistical accuracy.

10. As per claims 13 and 36,

Reboh et al. ('634) discloses the method of claim 11,

Reboh et al. ('634) does not explicitly disclose the input data includes financial data calculated by a financial risk management system. Masch ('762) discloses the input data includes financial data calculated by a financial risk management system;(Column 2, lines 21-34). It would be obvious to one having ordinary skill in the art at the time the invention was made to combine the Reboh et al method with the Masch ('762) method in order to generate a sufficient amount of data to achieve statistical accuracy.

11. As per claim 34,

Reboh et al. ('634) discloses the method of claim 30,

Reboh et al. ('634) does not explicitly disclose classifying the difference between the first information content and the second information content using a plurality of categories that

Art Unit: 3685

correlate to odds that the difference is an error in the inputted financial data. Masch ('762) discloses classifying the difference between the first information content and the second information content using a plurality of categories that correlate to odds that the difference is an error in the inputted financial data. (Column 32, lines 36-55). It would be obvious to one having ordinary skill in the art at the time the invention was made to combine the Reboh et al method with the Masch ('762) method in order to generate a sufficient amount of data to achieve statistical accuracy.

12. As per claim 37,

Reboh et al. ('634) discloses the method of claim 30,

Reboh et al. ('634) does not explicitly disclose determining whether a variation in the inputted financial data is greater than a current mark to market or a maximum likely increase in value.

Masch ('762) discloses determining whether a variation in the inputted financial data is greater than a current mark to market or a maximum likely increase in value.(Column 12, lines 19-32). It would be obvious to one having ordinary skill in the art at the time the invention was made to combine the Reboh et al method with the Masch ('762) method in order to generate a sufficient amount of data to achieve statistical accuracy.

13. Claims 35, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reboh et al., (US Patent No 4,866,634) in view of Hedstrom et al. (US Patent

Art Unit: 3685

6,477,471) in view of Grant et al (US Patent 4,694,397) and further in view of Huh (US Patent 5,396,612) and further in view of Nawrocki.

As per claims 35, 41 and 42,

Reboh et al. ('634) discloses a method for detecting abnormalities in input data to a financial risk management system, the method comprising:

receiving by a computer a set of input data to a financial risk management system;

(Column 4, lines 18-23)

Reboh et al. ('634) does not explicitly disclose receiving by the computer one or more historical values, each historical value representing a previous set of input data; Hedstrom et al. ('471) discloses receiving by the computer one or more historical values, each historical value representing a previous set of input data; (Figures 4 and 5, Column 3, lines 19-36 – confidence level corresponds to “goodness” prediction). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the Reboh et al method with Hedstrom et al. ('471) method in order to reduce the cost of error correction in databases by providing a simple and inexpensive process to ensure the quality of the data being processed.

Reboh et al. fails to teach preparing a report by the computer; wherein calculating the likelihood that changes to the set of input data are the result of one or more errors comprises: determining information content of the input data; performing a statistical analysis of the information content relative to the one or more historical values; Huh et al. teaches preparing a report by the computer; (see column 3, lines 27-33) wherein

Art Unit: 3685

calculating the likelihood that changes to the set of input data are the result of one or more errors comprises: determining information content of the input data; performing a statistical analysis of the information content relative to the one or more historical values; (see column 4, lines 36-67 and column 5, lines 1- 11). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this feature into the method of Reboh et al. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of determining the root cause of the problems to decrease the error rate (see column 5, lines 6-11 of Huh et al.)

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN M. WINTER whose telephone number is (571)272-6713. The examiner can normally be reached on M-F 8:30-6, 1st Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Calvin Hewitt can be reached on (571) 272-6709. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3685

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMW

/CALVIN L HEWITT II/  
Supervisory Patent Examiner, Art Unit 3685